

We Claim:

1. An optical body, comprising:
a plurality of first optical layers, each first optical layer being oriented and
5 comprising a polyester having terephthalate comonomer units and ethylene glycol
comonomer units; and
a plurality of second optical layers disposed in a repeating sequence with the
plurality of first optical layers, each second optical layer comprising a copolymer of
polymethyl methacrylate that contains comonomer units that depress a glass transition
10 temperature of the copolymer below a glass transition temperature of the polyester of the
first optical layers;
the optical body being configured and arranged to reflect at least a portion of light
over at least one wavelength region.
- 15 2. The optical body of claim 1, wherein the comonomer units are selected
from ethyl acrylate, butyl acrylate, n-butyl methacrylate, and ethyl methacrylate.
3. The optical body of claim 1, wherein the first optical layers have an in-
plane birefringence of at least about 0.05.
- 20 4. The optical body of claim 1, wherein at least one in-plane index of
refraction of the first optical layers differs by at least about 0.1 from an in-plane index of
refraction, in the same direction, of the second optical layers.
- 25 5. The optical body of claim 1, wherein the optical body is configured and
arranged to reflect at least a substantial portion of light in a visible wavelength region.
6. The optical body of claim 5, wherein the optical body has a blue
appearance that shifts to red as the viewing angle increases with respect to normal

incidence.

7. The optical body of claim 1, wherein the optical body is configured and arranged to reflect a substantial portion of light in an infrared wavelength region.

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8. The optical body of claim 1, wherein the first polyester is polyethylene terephthalate.

9. The optical body of claim 1, wherein the first and second optical layers are coextruded.

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10. The optical body of claim 1, wherein the first optical layers are biaxially oriented.

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11. The optical body of claim 1, wherein z-axis refractive indices of the first and second optical layers differ by no more than about 0.04.

12. An article, comprising:

a mirror comprising

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a plurality of first optical layers, each first optical layer being oriented and comprising a polyester having terephthalate comonomer units and ethylene glycol comonomer units, and

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a plurality of second optical layers disposed in a repeating sequence with the plurality of first optical layers, each second optical layer comprising a copolymer of polymethyl methacrylate that contains comonomer units that depress a glass transition temperature of the copolymer below a glass transition temperature of the polyester of the first optical layers,

the mirror being configured and arranged to reflect at least a portion of light over at least one wavelength region.

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13. The article of claim 12, wherein the mirror is configured and arranged to reflect a substantial portion of light in an infrared wavelength region.

14. The article of claim 12, wherein the mirror is configured and arranged to reflect a substantial portion of light in a visible wavelength region.

15. The article of claim 12, wherein the mirror is configured and arranged to reflect a substantial portion of light in an ultraviolet wavelength region.

16. An article, comprising:

a light source; and

an optical body disposed to receive light from the light source, the optical body comprising

a plurality of first optical layers, each first optical layer being oriented and comprising a polyester having terephthalate comonomer units and ethylene glycol comonomer units, and

a plurality of second optical layers disposed in a repeating sequence with the plurality of first optical layers, each second optical layer comprising a copolymer of polymethyl methacrylate that contains comonomer units that depress a glass transition temperature of the copolymer below a glass transition temperature of the polyester of the first optical layers,

the optical body being configured and arranged to reflect at least a portion of light over at least one wavelength region.

17. The article of claim 16, wherein the optical body is configured and arranged to reflect a substantial portion of light in an infrared wavelength region.

18. The article of claim 16, wherein the optical body is configured and arranged to reflect a substantial portion of light in a visible wavelength region.

19. The article of claim 16, wherein the optical body is configured and arranged to reflect a substantial portion of light in an ultraviolet wavelength region.

5 20. The article of claim 16, wherein z-axis refractive indices of the first and second optical layers differ by no more than about 0.04.